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In the Claims

1. (Currently Amended) A welding system having a gas filter for preventing a shielding gas supplied from a gas cylinder from introducing particles exceeding a predetermined size from entering a gas solenoid valve, the gas filter having a welding system comprising a housing, the housing having an inlet adapted to be connected to a gas cylinder and an outlet adapted to be connected to a gas solenoid valve, the housing having a passageway extending between the inlet and the outlet, a filter screen retained within the housing, the filter screen being located in the passageway to prevent particles exceeding a predetermined size from passing through the filter screen to reach the outlet.

2. (Currently Amended) ~~A gas filter as defined in~~ The welding system of claim 1 wherein the inlet of the gas filter comprises a standard female threaded fitting and the outlet comprises a standard male threaded fitting.

3. (Currently Amended) ~~A gas filter as defined in~~ The welding system of claim 1 wherein the filter screen of the gas filter is constructed of stainless steel having a plurality of micro pores formed therein.

4. (Currently Amended) ~~A gas filter as defined in~~ The welding system of claim 3 wherein the micro pores of the filter screen prevent passage through the filter screen of particles larger than about 100 microns.

5. (Currently Amended) ~~A gas filter as defined in~~ The welding system of claim 1 wherein the gas filter passageway is formed within the housing to have an outwardly extending internal annular recess and the filter screen is retained within the housing by being fitted within the annular recess.

6. (Currently Amended) ~~A gas filter as defined in~~ The welding system claim 5 wherein the gas filter passageway tapers inwardly in the direction from the inlet toward the outlet to create a sharp circular edge forming one edge of the annular recess.

7. (Original) A system for providing a shielding gas to a welding apparatus, the system comprising a cylinder containing a quantity of shielding gas, a gas hose having one end

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connected to the cylinder, a gas solenoid valve adapted to be opened and closed by means of an electrical signal, the gas solenoid valve having an inlet, a shielding gas filter having an outlet connected to the inlet of the gas solenoid valve and an inlet connected to the other end of the gas hose, the shielding gas filter having a housing, the housing having an inlet and an outlet and a passageway extending between the inlet and the outlet, a filter screen retained within the housing, the filter screen located within the passageway to prevent particles exceeding a predetermined size from passing through the filter screen to reach the outlet.

8. (Original) A system as defined in claim 7 wherein the inlet of the housing comprises a female threaded fitting and the outlet of the housing comprises a male threaded fitting.

9. (Original) A system as defined in claim 8 wherein the filter screen is a stainless steel material having micro pores formed therein.

10. (Original) A system as defined in claim 9 wherein the micro pores prevent particles larger than 100 microns from passing through the micro pores.

11. (Original) A system as defined in claim 7 wherein the passageway is formed within the housing to have an outwardly extending internal annular recess and the filter screen is retained within the housing by being fitted within the annular recess.

12. (Original) A system as defined in claim 11 wherein the passageway tapers inwardly in the direction from the inlet toward the outlet to create a sharp circular edge forming one edge of the annular recess.

13. (Original) A method of preventing particles exceeding a predetermined size from entering a gas solenoid valve connected to a gas hose delivering a shielding gas in a welding apparatus, the method comprising the steps of:

- providing a shielding gas filter comprising a housing having a passageway and having a gas filter screen located in the passageway,
- disconnecting the gas hose from the gas solenoid valve,
- connecting the shielding gas filter to the gas solenoid valve;
- connecting the gas hose to the shielding gas filter,

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whereby all of the gas from the gas supply passes through the shielding gas filter before entering the solenoid valve.

14. (Original) A method as defined in claim 13 where the step of providing a shielding gas filter comprises providing a shielding gas filter having a gas filter screen with a plurality of micro pores formed therein.

15. (Original) A method as defined in claim 14 where the step of providing a shielding gas filter comprises providing a shielding gas filter having a gas filter screen with micro pores of about 100 microns.

16. (Original) A method as defined in claim 13 where the step of providing a gas shielding filter comprises providing a shielding gas filter having an inlet that is a female threaded fitting and an outlet that is a male threaded fitting.

17. (Original) A method as defined in claim 13 where the step of providing a shielding gas filter comprises providing a housing having a passageway having an outwardly extending internal annular recess formed therein and the gas filter screen is located within the annular recess.

18. (Cancelled)

19. (Previously Presented) A system as defined in claim 7 incorporated into a device capable of generating power applicable to welding.

20. (Previously Presented) The method as defined in claim 13 whereby all of the gas from the gas supply further passes to a torch of a welding device thereby shielding a weld performed thereat.

21. (Previously Presented) A welding system comprising:
a gas cylinder having a shielding gas therein;
a regulator attached to the gas cylinder and constructed to regulate a flow therefrom;

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a solenoid valve in fluid communication with the regulator and constructed to control flow to a welding torch;

a housing disposed between the regulator and the solenoid valve; and

a filter located in the housing and constructed to filter a flow of shielding gas therethrough.

22. (Previously Presented) The welding system of claim 21 wherein the filter is planar.

23. (Previously Presented) The welding system of claim 21 wherein the housing further comprises an annular groove on an interior surface thereof wherein the annular groove is constructed to receive the filter.

24. (Previously Presented) The welding system of claim 21 wherein the filter is press fit into the housing.

25. (Previously Presented) The welding system of claim 21 wherein the housing further comprises an inlet having threading therein and an outlet having a threading thereon.

26. (Previously Presented) The welding system of claim 23 wherein a diameter of the annular groove is slightly less than a diameter of the filter such that the filter is deflected when positioned into the groove.

27. (Previously Presented) The welding system of claim 23 wherein the annular groove has a thickness that is slightly larger than a thickness of the filter.

28. (New) A shielding gas filter assembly comprising:

a housing having an inlet constructed to connect the housing to a shielding gas source and an outlet constructed to connect the housing to a welding apparatus;

a passageway extending through the housing between the inlet and the outlet;

and

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a filter screen retained in the housing and located in the passageway to prevent particles exceeding a predetermined size from passing through the filter screen and reaching the outlet of the housing.

29. (New) The assembly of claim 28 further comprising an annular groove formed in the passageway between the inlet and the outlet, the annular groove constructed to removeably retain the filter screen within the housing.

30. (New) The assembly of claim 28 wherein the filter screen is generally planar and has a plurality of micro pores formed therethrough.

31. (New) The assembly of claim 28 wherein the filter screen is constructed from stainless steel.

32. (New) The assembly of claim 28 wherein the filter screen is positioned in the housing generally transverse to a direction of flow through the passageway.

33. (New) The assembly of claim 28 wherein a diameter of the passageway proximate the inlet is greater than a diameter of the passageway proximate the outlet.

34. (New) The assembly of claim 28 further comprising a solenoid valve fluidly connected between the outlet of the housing and the welding apparatus.